## Article Comparison Chart

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| Article | **Topic,**  **Author,**  **Author's**  **background** | ProblemStatementor ResearchProblem | ResearchMethods | Types ofData &DataSources | DataCollectionStrategyand/orInstrument | DataAnalysisApproach | Citation(APA 6thedition) |
| **Article 1:**  Activity Schedules, Computer Technology, and Teaching Children With Autism Spectrum Disorders | Technology uses for students with autism  Robert Stromer, Ph. D. associate professor and senior scientist at the University of Massachusetts Medical School, Shriver Center, in Waltham, Massechusetts;  Jonathan W. Kimball, Ph. D. BCBA is a behavior analyst with Woodfords Family Services in Portland, Maine;  Elisabeth M. Kinney, MS, BCBA is director of Woodfords Preschool in Waterville, Maine; Bridget A. Taylor, Ph.D., BCBA is executive director of the Alpine Learning Group in Paramus, New Jersey. | Will integrating multimedia computer supports with activity schedules an effective way to help students with autism manage their work, play, and skill-building activities independently? | A blend of computer and notebook activity schedules provided a framework for studies on teaching play, socialization, and communication. | Observations, literature evaluation | Anecdotal Records | Qualitative data and evaluation of literature and intent for future research | Stromer, R., Kimball, J., Kinney, E., & Taylor, B. (2006). Activity Schedules, Computer Technology, and Teaching Children with Autism Spectrum Disorders. Focus on Autism and Other Developmental Disabilities, 21(1), 14-24. Retrieved from ERIC database. |
| **Article 2:**  Autism Treatment Survey: Services Received by Children with Autism Spectrum Disorders in Public School Classrooms | Resources used for students with autism  Kristen L. Hess, Michael J. Morrier, L. Juane Heflin, Michelle L. Ivey, Department of Educational Psychology and Special Education, Georgia State University. | What are some identified strategies used in education for children with autism spectrum disorders? | Teachers were provided with a web-based survey in which they selected their answers from a drop-down menu. The survey also included a section for teachers to give constructed responses. | Survey evaluation | Data was collected via an Internet survey using web space provided by GSU at no cost to the researchers. Participants were able to access the website at their leisure during the specified 3-month period of data collection. | Frequency counts identified 43 total strategies were most commonly being used as reported by study respondents. Totals were converted to percentages for all treatments used in schools. | Hess, K., Morrier, M., Heflin, L., & Ivey, M. (2008). Autism Treatment Survey: Services Received by Children with Autism Spectrum Disorders in Public School Classrooms. Journal of Autism and Developmental Disorders, 38(5), 961-971. Retrieved from ERIC database. |
| **Article 3:**  Engagement with Electronic Screen Media Among Students with Autism Spectrum Disorders | Effects of electronic screen media among students with autism  Beth A. Mineo, University of Deleware; William Ziegler, Bucks County Intermediate Unit; Susan Gill, Donna Salkin, Pennsylvania Training and Technical Assistance Network. | What is the relative engagement potential of four types of electronic screen media; animated video, video of self, video of a familiar person engaged with an immersive virtual reality (VR) game, and immersion of self in the VR game? | Participants were assigned to three groups, defined by the visual presentation format to which they were exposed. All participants were exposed to the same baseline condition (an animated video). Students were shown different types of electronic screen media and observations were used for data collection. | Observations and teacher/parent surveys were used to collect data /student behavior checklist | Anecdotal records were taken by teachers/  parents ; a survey was also provided for teachers and parents to fill out | Data was coded and put into a chart for analysis. Student target behaviors in reaction to different types of ESM were recorded by teachers and parents by using a checklist. Behavior frequency was converted into percentages to show popular reactions to specific types of ESM stimuli. | Mineo, B., Ziegler, W., Gill, S., & Salkin, D. (2009). Engagement with Electronic Screen Media among Students with Autism Spectrum Disorders. *Journal of Autism and Developmental Disorders*, *39*(1), 172-187. Retrieved from ERIC database. |
| **Article 4:**  The Computer in the Classroom: A Medium for Enhancing Social Interaction with Young People with Autism Spectrum Disorders? | Effects of computers on students with autism  Angela Jacklin, is a senior lecturer in education and director of student support at the University of Sussex. William Farr is a teacher at a primary school in Sussex and former MA student at Sussex University. | The computer in the classroom: a medium for enhancing social interaction with young people with autism spectrum disorders? | Following a pilot study, data was gathered from 43 observations, varying in length from ten to 20 minutes, comprising approximately ten hours of observation, total. | Qualitative data was collected using a mixture of observation and field notes. The data was analyzing in relation to interaction. Three case studies were chosen to illustrate issues that emerged from the study and to allow for focus on pupils differing abilities and ways of interacting with the computer and with other people. | Data collection used a mixture of participant and non-participant observation together with focused interviews with staff who worked with the three case study pupils. | Codes were developed to facilitate data gathering and analysis, drawing on pilot observations and informed by key literature. The attempt to code data was problematic due the difficulty in defining the context of computer-based work. During the pilot study, categories were redefined and later used analytically rather than for collection of data. | Jacklin, A., & Farr, W. (2005). The Computer in the Classroom: A Medium for Enhancing Social Interaction with Young People with Autistic Spectrum Disorders?. British Journal of Special Education,32(4), 202-210. Retrieved from ERIC database. |
| **Article 5:**  Collaborative Virtual Environment Technology for People with Autism | Effects of virtual environments of students with autism  David Moore, Ph. D. is a principal lecturer and teacher in the School of Computing, Leeds Metropolitan University, United Kingdom. Yufang Cheng, Ph. D. is an assistant professor in the Department of Business Education of National Changhua University of Education in Taiwan. Paul McGrath, BS, is an associate dean and head of school of computing at Leeds Metropolitan University. Norman J. Powell, Ph. D. is a problem-based learning officer, Manchester University. | Can collaborative virtual environments (CVEs) be potentially valuable technology for people with autism? | The investigation concentrated on the ability for people with autism to interact with avatars. To facilitate such an investigation, the researchers developed a simple computer system. The research interest in the system is to see it as a context for an empirical study of interactions with avatars. | Qualitative data was collected in the form of a questionnaire which was mailed with the software to autistic individuals’ homes. | Participants were asked to work through the three stages of the SVE system. The software logged their work onto a diskette that had been sent in their pack. After the users had operated the software, the users and their parents were each asked to fill in a questionnaire. | The method of data analysis compared the observed responses of the participants to the questions against the responses that would be expected where they to be selected by chance. | David Moore, Yufang Cheng, Paul McGrath, & Norman J Powell. (2005). Collaborative Virtual Environment Technology for People With Autism. Focus on Autism and Other Developmental Disabilities, 20(4), 231-243.  Retrieved September 4, 2010, from ProQuest Education Journals. |
| **Article 6:**  A Comparison of Video Modeling Perspectives for Students with Autism | Video modeling for students with autism  Dr. Kevin M. Ayers, is an assistant professor, Department of Communication Sciences & Special Education at the University of Georgia. John Langone is a Professor Department of Communication Sciences & Special Education at the University of Georgia. | The goal of this study was to identify which type of video model led to faster acquisition and better generalization with the fewest errors. | Students were presented with cooking instructions modeled in first person by an adult. Students were also given cooking instructions by using video clips on the computer. | Pre/Posttests , PC probes, and video modeling | For the pre/posttest conditions, the researcher and reliability observer collected data on student responses. | Data was compared using a point-by-point comparison in which the number of agreements was divided by the number of agreements plus disagreements and multiplied by 100 to compare percentage agreement. | Kevin M Ayres, & John Langone. (2007). A Comparison of Video Modeling Perspectives for Students with Autism. Journal of Special Education Technology, 22(2), 15-30.  Retrieved September 4, 2010, from ProQuest Education Journals. |
| **Article 7:**  Take the Pencil Out of the Process | Computers for students with autism  Leslie Broun (CEC VT Federation) Autism Spectrum Disorders Consultant, formerly Peel District School Board, Mississauga, Ontario, Canada. | Can keyboarding be used to supplement the motor planning difficulties experienced by many persons with autism spectrum disorders, particularly, printing and handwriting? | Students were given assignments to complete by writing and assignments to be completed using a computer. | Types of data included student work samples and teacher observation work quality . | Teachers assessed written work and computer completed assignments. | Data analysis was put into a t-chart of student behaviors when work was completed by hand or using the computer. | Broun, L. (2009). Take the Pencil out of the Process. TEACHING Exceptional Children, 42(1), 14-21. Retrieved from ERIC database. |
| **Article 8:**  The Effects of Presenting High-Preference Items, Paired With Choice, Via Computer-Based Video Programming on Task Completion of Students With Autism | Engagement in reference to student interest for students with autism  Linda C. Mechling is an associate professor of special education, University of North Carolina, Wilmington. David L. Gast is professor of special education at the University of Georgia. Beth A. Cronin is a special education teacher, New Hanover County Schools, Wilmington, North Carolina. | What are the effects of presenting high-preference items, paired with choice, via computer-based video programming on task completion for students with autism? | Baseline and intervention sessions were conducted in a self-contained classroom for students with low to high functioning ASD. A task schedule strip was taped to the top of the desk, with numerals written on cards to indicate the tasks to be completed. An out-of-sight video camera was used to collect reliability data. | Baseline and intervention data was used in this study. | Task duration was recorded by the researcher by writing start and stop times on the data collection sheet. Start time was recorded when the student touched the first task number card on his task sequence strip and stopped when he removed the picture card representing the preferred stimulus. | The student independent work sessions and time were recorded and put into a line graph to show the task work time in relation to the stimulus. | Mechling, L., Gast, D., & Cronin, B. (2006). The Effects of Presenting High-Preference Items, Paired with Choice, via Computer-Based Video Programming on Task Completion of Students with Autism. Focus on Autism and Other Developmental Disabilities, 21(1), 7-13. Retrieved from ERIC database. |
| **Article 9:**  Using Computer-Presented Social Stories and Video Models to Increase the Social Communication Skills of Children With High-Functioning Autism Spectrum Disorders | Effects of technology on social skills for students with autism  Frank J. Sansosti, assistant professor of school psychology at Kent State University; Kelly A. Powell-Smith, senior research scientist with Dynamic Measurement Group. | The purpose of this study was to investigate the effects of computer-presented Social Studies and video models on the social communication skills of three children with High-Functioning Autism/Asperger’s Syndrome. | Researchers identified target behaviors and provided students with baseline conditions and intervention strategies to assess how social stories helped improve communication. | Observational data, baseline, intervention, and follow up data | Observation, evaluation of student behavior | Each participant’s social communication behaviors were graphed as a percentage of intervals per session. Data collected during baseline, intervention, and follow-up were inspected visually for changes in mean and level as well as nonoverlapping data points. | Sansosti, F., & Powell-Smith, K.. (2008). Using Computer-Presented Social Stories and Video Models to Increase the Social Communication Skills of Children With High-Functioning Autism Spectrum Disorders. Journal of Positive Behavior Interventions, 10(3), 162-178. Retrieved September 19, 2010, from ProQuest Education Journals. |
| **Article 10:**  A New Way Forward | How to equip autistic children to enter the mainstream population in the 21st century  Sara Stroud is a freelance writer based in Oakland, California. | How can teachers use technology to mainstream students with autism? | Students from the New York City school system engaged in a virtual block party using *Second Life* software. Students acted as party planners and attendees. | Qualitative data was collected from teachers and administrators in the form of teacher observation and administration interviews. | Data was collected by interviews and anecdotal records. | Data was analyzed by frequency of teachers/  Administrators who spoke positively of student communication, participation, and motivation in light of using the software. | Stroud, S. (2009). A New Way Forward. T.H.E. Journal, 36(10-), 18-22. Retrieved from ERIC database. |
| **Article 11:**  Comparison of Static Picture and Video Prompting on the Performance of Cooking-Related Tasks by Students with Autism | Video modeling prompts for students with autism  Linda C. Mechling, is an associate professor of special education, University of North Carolina, Wilmington. Melissa R. Gustafson is a graduate student seeking a teaching license in Special Education. | How do static pictures compare to video prompting on the performance of cooking-related tasks by students with autism? | Six male high school-age students with a diagnosis of ASD participated. The students were given twenty cooking-related tasks. | Qualitative data was collected in the form of baseline, intervention, and final treatment sessions. | The instructor collected data on each student’s ability to perform each cooking-related task during each condition. | Data was reported based on the percentage of cooking related tasks performed correctly by each student using pictures or video prompts. Data was converted to percentages and graphed. | Mechling, L., & Gustafson, M.. (2008). Comparison of Static Picture and Video Prompting on the Performance of Cooking-Related Tasks by Students with Autism. Journal of Special Education Technology, 23(3), 31-45.  Retrieved September 21, 2010, from ProQuest Education Journals. |
| **Article 12:**  Enhancing and Accelerating the Pace of Autism Research and Treatment | Technological innovations for students with autism  Matthew S. Goodwin is the associate director of research at the Groden Center. | How can researchers enhance and accelerate the pace of autism research and treatment? | Teachers were asked to administer technological interventions for students with autism. Teachers were interviewed on the administration process, school support, and technological involvement. | Quantitative data was collected on the number of teachers who actually used technology in the interventions. Qualitative data was collected during the teacher interview process. | Interviews, surveys | The quantitative data was put into percentages and graphed. The qualitative data was placed into categories and evaluated. | Goodwin, M. (2008). Enhancing and Accelerating the Pace of Autism Research and Treatment: The Promise of Developing Innovative Technology. Focus on Autism and Other Developmental Disabilities, 23(2), 125-128.  Retrieved September 21, 2010, from ProQuest Education Journals. |
| **Article 13:**  Use of Technology in Interventions for Children with Autism | The effects of technology on students with autism  Tina R. Goldsmith, Linda A. LeBlanc, Western Michigan University. | The purpose of this paper is to review the growing empirical support for the efficacy of technology-based interventions with children with autism and to recommend future directions for research. | Auditory prompts were given to cue in-class self monitoring as an intervention for decreasing off-task behavior in a classroom setting. | Qualitative data in the form of teacher observation was used to determine student engagement in the technology. | Data was collected using anecdotal records and student interviews. | Data was converted to percentages of time engaged in off-task behavior and placed into a graph. | Goldsmith, T., & LeBlanc, L. (2004). Use of Technology in Interventions for Children with Autism. *Journal of Early and Intensive Behavior Intervention*, *1*(2), 166-178. Retrieved from ERIC database. |
| **Article 14:**  Evaluation the Effectiveness of Video Instruction on Social and Communication Skills Training for Children With Autism Spectrum Disorders: A Review of the Literature | Video modeling as an intervention for students with autism  Smita Shukla-Mehta, Ph. D. is an associate professor of special education; Trube Miller, M. Ed. is a doctoral student; Kevin J. Callahan, Ph. D. is an associate professor of special education all at the University of North Texas. | Is video instruction on social and communication skills training for children with autism effective? | Researchers evaluated literature reviews to conduct the study. Literature guidelines included the intervention had to be a video instructional strategy, all participants in all studies had to be diagnosed with autism, the video intervention has to be used to target social and/or communication responses, the effect of behavior had to be evident, the articles had to had to be peer reviewed in EBSCOhost. | All except one of the twenty-six studies utilized a single-subject research design to document effect. Student observation along with behavior checklists were included in the data instruments. | Literature reviews | Literature evaluation was used with intent for future research. | Shukla-Mehta, S., Miller, T., & Callahan, K. (2010). Evaluating the Effectiveness of Video Instruction on Social and Communication Skills Training for Children With Autism Spectrum Disorders: A Review of the Literature. *Focus on Autism and Other Developmental Disabilities,* *25*(1), 23-36.  Retrieved October 12, 2010, from ProQuest Education Journals. |
| **Article 15:**  Does the Model Matter? Comparing Video Self-Modeling and Video Adult Modeling for Task Acquisition and Maintenance by Adolescents with Autism Spectrum Disorders | Video modeling versus adult modeling for students with autism  David F. Cihak, Ph. D. is an assistant professor at the University of Tennessee. Leigh Schrader, M. S. is a high school special education teacher from UT. | Is video self-modeling more meaningful than video adult modeling for task acquisition and maintenance among students with autism? | Two vocational and two prevocational tasks were selected based on their similarity and because they were consistent with participants’ individual transition plans. | Data sheets designed to record the controlled presentation of task analyzed chains. | Both tasks were presented to participants once daily during morning and afternoon. Event recording procedures were used to record each step as completed independently. | The mean percentage of independent steps of the task analyses and the number of sessions required to reach acquisition criterion were recorded during both video conditions. | Cihak, D., & Schrader, L. (2008). Does the Model Matter? Comparing Video Self-Modeling and Video Adult Modeling for Task Acquisition and Maintenance by Adolescents with Autism Spectrum Disorders. *Journal of Special Education Technology,* *23*(3), 9-20.  Retrieved October 12, 2010, from ProQuest Education Journals. |

**Critique**

**A. Similarities**

All of the articles I used had a common population of students with autism. They all discussed the effects of technology on students with autism. Several of the articles had data based solely on surveys completed by teachers of students with autism. Most of the articles I used were case studies or experimental research articles in which students with autism were observed using a particular type of technology. Six articles focused specifically on the effects of video modeling on students with autism. Three of the fifteen articles focused on how to use technology to enhance the communication skills of students with autism.

**B. Differences**

As stated in the similarities section, all of the articles were focused on the effects of using technology for students with autism. Although this is true, the means for collecting data for the articles varied somewhat. The collection of articles I compiled consisted of an assortment of case studies, experimental, quantitative, qualitative, and mixed approach research. Six articles focused on the effects of video modeling for students with autism. Of those six articles, several of them centered on task completion, or using video modeling/video instruction to have students complete a specified task. The other articles about the effects of video modeling focused on how to enhance communication and/or social skills of students with autism.

**C. Strengths**

Although video modeling was not the avenue I wanted to pursue initially, the articles in which video modeling is discussed, happen to be the ones that provide a strong support of using technology in the classroom for instruction for students with autism. Other articles like *Taking the Pencil Out of the Process* and other articles that provide good information concerning different instructional strategies for students with autism seem to aid in how to use technology for students with autism in addition to video modeling. I found the articles in which comparisons were used to be very helpful in allowing me to see the difference between instructional practices I use and instructional practices I can use to boost student achievement.

**D. Weak Areas**

Some of the weak areas in article collection are found in the data collection methods. Several articles use teacher surveys as the only means for determining how and if a technology is effective for autistic students. Although I have found qualitative data to be a very beneficial source, I think a mixed approach would provide me with a clearer picture of “research based” strategies for using technology for students with autism. I don’t feel like I could, in good conscience, practice or recommend that other teachers practice strategies in which I have not seen quantitative data to back it up. Another area I feel is a weak point in my articles is the limited strategies I found for implementing technology in a special needs classroom for students with autism.

**E. Take Aways**

I will take away a myriad of things from the articles I reviewed. I have learned a lot about video modeling and the effect it has on students with autism. I learned that video modeling is more effective than adult modeling in task completion because it is predictable and students are able to review it as many times as needed to complete the task. I found out that a mixed data approach seems to provide the reader with a better picture of an effective technology tool/strategy because it is not based solely on the teacher’s opinion. I found out that although most of the time video modeling is use for task completion, it has been found to also promote social interaction among students with autism. Technology can be used as an intervention, tool, or motivator for students with autism, as these students, like many, find technology intrinsically motivating. Finally, the most interesting fact that I learned while completing my research article collection review is that computers, being used as a word processor, can boost student performance because it allows students with autism to focus on the content rather than letter formation. Many of the tidbits I found during the article collection were tidbits alone but there were many parallels, all of which supported using technology in the classroom for students with autism.